

IT IS CLAIMED:

1. A peripheral card for use with a host system, comprising:
a mother card portion externally and removably coupled electrically and mechanically to the host system;
5 and
a daughter card portion removably coupled electrically and mechanically to said mother card portion.
2. A peripheral card for use with a host system, comprising:
10 a mother card portion externally and removably coupled electrically and mechanically to the host system;
and
a plurality of daughter card portions removably coupled electrically and mechanically to said mother card portion.
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3. A peripheral card for use with a host system, comprising:
a mother card portion externally and removably coupled electrically and mechanically to the host system;
5 and
at least one daughter card portion removably coupled electrically and mechanically to said mother card portion.
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4. A peripheral card for use with a host system as in claim 3, wherein said mother card portion is coupled to the host system by a Personal Computer Memory Card International Association ("PCMCIA") interface.
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5. A peripheral card for use with a host system as in claim 3, wherein:

said at least one daughter card portion includes memory; and

5 said mother card portion includes a memory controller for controlling said memory.

6. A peripheral card for use with a host system as in claim 5, wherein said memory on said at least one daughter card portion is integrated-circuit ("IC")
10 memory.

7. A peripheral card for use with a host system as in claim 6, wherein:

said IC memory is a non-volatile memory, and whereby said daughter card portion serves as an externally
5 removable, non-volatile storage medium.

8. A peripheral card for use with a host system as in claim 6, wherein:

said non-volatile memory is Electrically Erasable Programmable Read Only Memory ("EEPROM").

9. A peripheral card for use with a host system as in claim 6, wherein:

said non-volatile memory is Flash Electrically Erasable Programmable Read Only Memory ("Flash").

5 10. A peripheral card for use with a host system as in claim 3, wherein:

said at least one daughter card portion includes a battery for powering the peripheral card.

11. A peripheral card for use with a host system as in claim 3, wherein:

5 said at least one daughter card portion includes a battery that serves as an uninterruptable power supply for the peripheral card.

12. A peripheral card for use with a host system as in claim 3, wherein:

10 each of said at least one daughter card portion in combination with said mother card implements a given peripheral selected from a predetermined group of peripherals, each peripheral in the predetermined group being implemented by a set of functional components associated therewith, and substantially all peripherals therein sharing a common set of functional components
15 thereamong;

said mother card portion includes a comprehensive controller encompassing said common set of functional components; and

20 said each of said at least one daughter card portion implementing a given peripheral includes said set of functional components associated with the given peripheral less said common set.

13. A peripheral card for use with a host system as in claim 3, wherein:

5 each of said at least one daughter card portion in combination with said mother card implements a given peripheral selected from a predetermined group of peripherals, each peripheral therein being implemented by a set of functional components associated therewith, each associated set of functional components partitionable into first and second subsets of functional components;

10 said mother card portion includes a comprehensive controller encompassing said first subset of functional components associated with each peripheral in the predetermined group; and

15 said each of said at least one daughter card portion implementing a given peripheral includes said second subset of functional components associated with the given peripheral.

14. A peripheral card for use with a host system as in claim 13, wherein:

20 said at least one daughter card portion is a memory device; and

 said comprehensive controller also controls said memory device.

15. A peripheral card for use with a host system as in claim 14, wherein said memory device is flash memory.

16. A peripheral card for use with a host system as in claim 14, wherein said memory device is a magnetic disk drive.

17. A peripheral card for use with a host system as in claim 14, wherein:

 said host system operates with a main memory; and

5 said memory device includes serving as the main memory.

18. A peripheral card for use with a host system as in claim 14, wherein:

10 said host system operates with a file memory;
and
 said memory device includes serving as the file
memory.

19. A peripheral card for use with a host
system as in claim 14, wherein:

5 said host system operates with a backup memory;
and
 said memory device includes serving as the
backup memory.

20. A peripheral card for use with a host
system as in claim 14, wherein:

10 said host system operates with an operating
system; and
 said memory device includes serving as storage
for the operating system.

21. A peripheral card for use with a host
system as in claim 13, wherein:

5 said at least one daughter card portion includes
a communication device; and
 said comprehensive controller also controls said
communication device.

22. A peripheral card for use with a host
system as in claim 21, wherein said communication device
is a modem.

23. A peripheral card for use with a host
system as in claim 21, wherein said communication device
is a facsimile device.

24. A peripheral card for use with a host
5 system as in claim 21, wherein said communication device
is a network adapter.

25. A peripheral card for use with a host
system as in claim 21, wherein said communication device
is a wireless communication device.

26. A peripheral card for use with a host
5 system as in claim 21, wherein said communication device
is a paging device.

27. A peripheral card for use with a host
system as in claim 13, wherein:

said comprehensive controller includes functions
that exchange data between said mother card and said each
5 daughter card portion.

28. A peripheral card for use with a host
system as in claim 2, wherein:

each of said plurality of daughter card portions
in combination with said mother card implements a given
10 peripheral selected from a predetermined group of
peripherals, each peripheral therein being implemented by
a set of functional components associated therewith, each
associated set of functional components partitionable into
first and second subsets of functional components;

15 said mother card portion includes a
comprehensive controller encompassing said first subset of
functional components associated with each peripheral in
the predetermined group; and

20 said each of said plurality of daughter card
portions implementing a given peripheral includes said

second subset of functional components associated with the given peripheral.

29. A peripheral card for use with a host system as in claim 28, wherein:

5 said comprehensive controller controls each said plurality of daughter card portions coupled to said mother card portion, and includes functions that exchange data between said each said plurality of daughter card portions coupled to said mother card portion.

30. A peripheral card for use with a host system as in claim 28, wherein:

10 said plurality of daughter card portions includes a first daughter card portion and a second daughter card portion; and

15 said comprehensive controller controls both the first daughter card portion and the second daughter card portion, and includes functions that exchange data between the first daughter card portion and the second daughter card portion.

31. A peripheral card for use with a host system as in claim 30, wherein:

the first daughter card portion and the second daughter card portion are memory devices; and

5 said comprehensive controller has functions that include copying stored data from the first daughter card portion to the second daughter card portion.

32. A peripheral card for use with a host system as in claim 30, wherein:

10 the first daughter card portion is a communication device and the second daughter card portion is a memory device; and

15 said comprehensive controller has functions that include copying data from the first daughter card portion to the second daughter card portion.

33. A peripheral card for use with a host system as in claim 30, wherein:

5 the first daughter card portion is a communication device and the second daughter card portion is a memory device; and

 said comprehensive controller has functions that include copying data from the second daughter card portion to the first daughter card portion.

34. A peripheral card for use with a host system as in claim 3, wherein:

 said at least one daughter card portion is inlaid into the mother card portion when coupled thereto.

35. A peripheral card for use with a host system as in claim 3, wherein:

5 said at least one daughter card portion coupling with the mother card portion is secured by an electromechanical latch.

36. A peripheral card for use with a host system as in claim 3, wherein:

 said at least one daughter card is detachable from the mother card portion by means of a spring-loaded ejector.

37. A peripheral card for use with a host system as in claim 3, wherein said mother card portion includes:

5 a host connector for removably coupling to the host system;

at least one daughter card connector for removably coupling to said at least one daughter card portion; and wherein

10 said host connector and said at least one daughter card connector are formed in one piece as an integral connector.

38. A peripheral card for use with a host system as in claim 3, wherein:

15 said host system operates with a main memory; and

 said mother card portion includes memory that serves as an extension of said main memory.

39. A peripheral card for use with a host system as in claim 3, wherein:

 said host system operates with a main memory; and

5 said mother card portion includes memory that serves as said main memory.

40. A peripheral card for use with a host system as in claim 39, wherein:

10 said mother card portion includes a controller for controlling said at least one daughter card portion; and

said controller has functions that include copying data from the main memory on the mother card portion to said at least one daughter card portion.

41. A peripheral card for use with a host system as in claim 39, wherein:

said mother card portion includes a controller for controlling said at least one daughter card portion; and

5 said controller has functions that include copying data from said at least one daughter card portion to the main memory on the mother card portion.

42. A peripheral card for use with a host system as in claim 3, wherein:

said host system operates with a processor; and
said mother card portion includes said processor.

43. A peripheral card for use with a host system as in claim 3, wherein:

said host system operates with a group of processors; and

5 said mother card portion includes at least a portion of said group of processors.

44. An electronic device including a first enclosed card with dimensions not exceeding 54mm x 80mm x 3.3mm, said first card having an electrical connector along one edge thereof that is functionally connected with a first electronic system contained within said first card, said first electronic system being of a type that requires electrical connection through said connector to

15 a supporting second electronic system located either (1) within a second card having dimensions less than 55mm x 90mm x 3.3mm and a receptacle that is electrically connected with said second electronic system and which mates with said connector, or (2) as part of a piece of host equipment significantly larger than said second card
20 that also includes a receptacle that is connected with the second electronic system and that mates with said connector.

45. The device of claim 44 wherein said first electronic system is a flash memory system, said second electronic system is a controller for said flash memory system, and said host equipment is a personal computer system.
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46. A peripheral card for use with a host system, comprising:

5 electronic functional components therein partitioned into a first set and a second set of functional components;

a daughter card portion for mounting said first set;

a mother card portion for mounting said second set; and wherein:

10 said mother card portion is externally and removably coupled electrically and mechanically to the host system; and

 said daughter card portion is removably coupled electrically and mechanically to said mother card portion.

47. A peripheral card for use with a host system as in claim 46, wherein:

5 said host system also incorporates said second set of functional components therein for removably receiving and operating with said daughter card portion directly.

48. A peripheral card for use with a host system as in claim 47, wherein:

5 said host system operates with a set of functional components partitionable into first and second subsets of functional components;

 said host system contains said first subset of functional components; and

 said mother card portion contains said second subset of functional components.

49. A peripheral device on a card for use with a host systems, comprising:

5 electronic functional components therein partitioned into a first set and a second set of functional components;

 a first card for mounting said first set; and wherein:

10 if the host system does not incorporate said second set, said peripheral device further comprises a second card for mounting said second set, said second card being removably coupled electrically and mechanically to the host system, and said first card being removably coupled electrically and mechanically to said second card; and

15 if the host system incorporates said second set, said first card is removably coupled electrically and mechanically to the host system.